

wear away, forming curved sides deepening towards the axes of the troughs.

As to why the whole texture of the rock should become concretionary and the whole outside surface peel off in one large scale, thick enough to preserve this wall like appearance, I am not know prepared to express an opinion, but hope to be able to submit some hypothesis after further study.

I have observed a similar though not entirely identical phenomenon near the Real Doleres in New Mexico, where an apparently plutonic rock was divided on the exterior in a similar manner, but in this case the whole mass was concretionary.

It appears to open an entirely new question as to whether thick plates of igneous rocks (and *a fortiori* sandstones, &c.,) may not be *weathered* into concretions.

PAH-UTE CREMATION.

(*Read before the American Philosophical Society, Dec. 4th, 1874.*)

READING, Penna., Nov. 25th, 1874.

DR. J. L. LECONTE,

Dear Sir:—In the last issue of the "Popular Science Monthly," I noticed an editorial alluding to your paper upon the subject of "Cremation," as a custom of one of the tribes of Indians inhabiting California.

The same custom prevails amongst that sub-tribe of Pah-Utes, known as the Cottonwood, Corn Creek, Spring Mountain and Pah-rimp Spring Indians. The varying local names are due only to the locality they inhabit, and they are one and the same tribe in reality. While attached to Lt. Wheeler's Expedition of 1871-2, I had ample opportunity to investigate anything pertaining to scientific subjects, and I took special care to collect all facts relating to the habits, customs, and superstitions of the Indian tribes through whose territory we passed.

The tract of country alluded to, as occupied by this sub-tribe of Pah-Utes, lies between 115° and 115°35' west longitude, and latitude north 35° and 36°. Spring Mountain being their stronghold, and is located just north of the "old Spanish Trail." By means of an interpreter, I obtained the following information. Upon the death of one of these Indians, a pile of wood is prepared in the immediate vicinity; this is so arranged as to form a rectangle, to the height of from two to three feet. The corpse is laid upon this, when the fire is started, after which wood is continually thrown across the pile until the body is reduced as much as possible. Mesquite, pine and cedar is usually employed, and forms excellent coals and an intense heat. All the remaining property,—as wearing apparel, arms, blankets, dogs and horse, (if the deceased possessed any)—is also burnt. These last named valuables, I have no doubt,

may be represented to have been burnt, as the number of horses among the tribe is very small. Although, according to their belief, when an Indian dies, his spirit goes to the East, which they consider the "White Man's Hunting Ground," and where he would be unable to hunt, were his spirit deprived of these valuable aids. The remains are then *covered with earth*, whether really *buried* I could not ascertain.

Amongst the Sioux, when an Indian hands to another a stick, it implies a horse, and as soon as the recipient hands the stick to the donor (when at the latter's camp) the horse is given in return. This custom is only observed while a party have collected to dance, and the object is, that when an Indian is rich enough to be able to give away a horse, his vanity is so immense, that he must relate his brave deeds, (Count his Coos) and for the purpose of having at least one admirer upon whom he can depend for applause, and flattering notices, as "How brave!" a noble Dacotah! etc., etc., he looks over the assemblage in a dignified manner and presents some one present with a stick of wood (about a foot in length, and thick as a finger,) for which a horse will be given on the following morning.

A similar custom *might*, partially be used, to, so to use the term, burn a horse in effigy, thereby saving a *poor* tribe a valuable member; for I must say the horses are the better of the two. I have seen and been amongst probably thirty sub-tribes, but the Pah-Utes, of the above named region are the only ones with whom we came in contact, who "Cremate."

Very sincerely,

W. J. HOFFMAN,
103 S. Sixth street.

Stated Meeting, December 18th, 1874.

Present, 17 members.

Vice-President, MR. FRALEY, in the chair.

A letter accepting membership was received from Mr. A. Selwyn, dated Montreal, Dec. 8, 1874.

Letters of acknowledgment were received from the Royal Observatory, at Prag, Oct. 8, (XV, i, 90, 91); the Batavian Society, at Rotterdam, Sept. 26, (89); and the Victoria Institute, London, Nov. 28.

A letter inviting subscription to three sheets of photographic portraits of members of the Hungarian Academy, was received from M. L. Aigner, Buda-Pest.